

# **ABSTRACT**

A packet receiver is provided that accurately estimates a frequency offset and a channel impulse response even when a transmitted packet is detected with an erroneous timing in a communication mode (typified by the LAN (local Area Network)) where packets are asynchronously transmitted, and thus provides a training sequence which can demodulate the received packet. The training sequence 101 is formed of K sequences 100-1 to 100-K serially connected, each formed of the same N symbols. Even in a channel where a inter-symbol interference occurs when such a training sequence is used, a received signal shifted by the time corresponding to N-symbols becomes the signal which is different by a phase difference caused by a frequency offset between the transmitter and the receiver. Thus, even if the head of a packet is detected with an erroneous timing, the frequency offset can be estimated.